

IN THE SPECIFICATION:

Please substitute paragraph [0033] for the following paragraph starting at page 7, line 1 and ending at line 1.

[0033] ~~FIG. 14 illustrates~~ FIGS. 14A - 14D illustrate elastic vibration modes of a flat plate;

Please substitute paragraph [0035] for the following paragraph starting at page 7, line 4 and ending at line 5.

[0035] ~~FIG. 16 is a diagram~~ FIGS. 16A - 16D are diagrams illustrating the configuration of a tenth embodiment of the present invention;

Please substitute paragraph [0074] for the following paragraph starting at page 16, line 17 and ending at page 17, line 5.

[0074] In the first and second embodiments, a stage having the shape of a beam is assumed. Since the beam has simple lower-order elastic vibration modes, control of elastic vibration is relatively easy. FIGS. 15A - 15C illustrate a flat stage having a substantially square shape, according to a fourth embodiment of the present invention. In this case, elastic-vibration modes are as shown in ~~FIG. 14~~ FIGS. 14A - 14D. First-order elastic vibration in such a case can be suppressed by providing means for applying force to four corners of the quadrangle. The fourth embodiment illustrates a case in which a very precise rigid-vibration control system is provided by controlling six degrees of freedom of rigid vibration of the flat stage as well as elastic vibration of the flat stage. In the following description, positions (x, y, z) in translational

three-axes directions with respect to a reference coordinate system and angles of rotation (θ_x , θ_y , θ_z) around translational three axes are called the positions of six degrees of freedom.

Please substitute paragraph [0075] for the following paragraph starting at page 17, line 6 and ending at line 18.

[0075] As shown in FIG. ~~15B~~ 15C, linear motors 32a - 32d for generating a force in the z direction (a direction perpendicular to the plane of FIG. 15B) are disposed at four corners of the flat plate, as driving means 3. In order to control rigid vibration modes in horizontal directions, four linear motors 32e - 32h for generating forces in horizontal directions (x and y directions) are also disposed. A mirror 72 and laser interferometers 71 are provided on the flat plate and a surface plate 48, serving as a reference position, respectively, as flat-plate rigid-vibration measuring means 7. Although not illustrated in ~~FIG. 15~~ FIGS. 15 A - 15C, in order to measure the positions of six degrees of freedom of the flat plate, six laser interferometers are provided at the minimum. According to measured values of the laser interferometers, the following rigid-body positions 70 of six degrees of freedom of a rigid body are measured:

$$[X \ Y \ Z \ \theta_x \ \theta_y \ \theta_z]^T.$$

Please substitute paragraph [0141] for the following paragraph starting at page 43, line 13 and ending at page 44, line 2.

[0141] FIGS. 30B - 30D ~~illustrates~~ illustrate the details of the tilt stage 112. FIGS. 30B and ~~30C~~ 30D represent the side and the back, respectively, of the tilt stage 112. Linear motors 132a - 132h drive the tilt stage 112. Each of the linear motors 132a - 132d generates a force in a horizontal direction, and each of the linear motors 132e - 132h generates a

force in a vertical direction. The tilt stage 112 performs movement in linear three-axes (x, y, and z) directions and rotation around three axes (θ_x , θ_y , θ_z) by the thrusts of the linear motors 32a - 32h, in order to control six axes of rigid vibration. Piezoelectric elements 121a - 121d are disposed as elastic-vibration driving means 102 for generating a force to bend the stage substrate 111. Piezoelectric elements 151a - 151d are disposed at portions adjacent to the piezoelectric elements 121a - 121d, respectively, as elastic-vibration measuring means 105 for measuring bending distortion. Elastic-vibration control means 106a - 106d input velocities measured by the measuring means 151a - 151d, and calculate and control forces generated by driving means 121a - 121d, respectively.